

claim:

1. A rubbery material having a first shape and size, a second shape and size, and a transition temperature, wherein the rubbery material shrinks from the second shape and size toward the first shape and size after the application of energy to the rubbery material where the application of energy is equivalent in result to raising the rubbery material's temperature to at least the transition temperature.
2. The rubbery material as set forth in claim 1, wherein the rubbery material is used in a condom and the transition temperature is in the range of 94 to 99 degrees Fahrenheit.
3. The rubbery material as set forth in claim 1, wherein the rubbery material is used in a glove.
4. The rubbery material as set forth in claim 1, wherein the rubbery material is used in a condom portion of a catheter.
5. A method for the manufacture and use of a rubbery material having a transition temperature, the method comprising the steps of:
- (i) manufacturing and cross-linking the rubbery material to a first shape and size;
 - (ii) after performing step (i), applying energy to the rubbery material, where the application of energy is equivalent in result to raising the rubbery material's temperature to at least the transition temperature;

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- Sub A2
- (iii) after performing step (i), stretching the rubbery material to a second shape and size; wherein steps (ii) and (iii) are performed in such a way that the rubbery material is in a state in which it is both in the second shape and size and its effective temperature is at least the transition temperature; and
- 5 (iv) after steps (ii) and (iii) have been performed, reducing the effective temperature of the rubbery material below the transition temperature while the rubbery material is kept in the second shape and size so that the rubbery material remains in the second shape and size until subsequent application of energy to the rubbery material equivalent in result to raising its temperature to at least the
- 10 transition temperature whereupon the rubbery material shrinks from the second shape and size toward the first shape and size.

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6. The method as set forth in claim 5, further comprising the step of: applying energy to the rubbery material so that it shrinks from the second
- 15 shape and size toward the first shape and size.

7. The method as set forth in claim 5, wherein the rubbery material comprises polybutadiene and its copolymers.

- Sub B
- 20 8. The method as set forth in claim 5, wherein the rubbery material comprises polyurethane elastomers and its copolymers.

- Sub C3
9. The method as set forth in claim 5, wherein the rubbery material comprises trans pentamer and its copolymers.

10. The method as set forth in claim 5, wherein the rubbery material comprises ethylene pimelate and its copolymers.

11. The method as set forth in claim 5, wherein the rubbery material comprises trans-1,4-polybutadiene and its copolymers.

12. The method as set forth in claim 5, wherein the rubbery material comprises synthetic isoprene and its copolymers.

13. The method as set forth in claim 5, wherein the rubbery material comprises synthetic cis-1,4-polyisoprene and its copolymers.

14. A condom made according to the method set forth in claim 5.

15. A condom made and used according to the method set forth in claim 6.

16. A condom made according to the method as set forth in any one of claims 7-13.

17. A glove made according to the method set forth in claim 5.

18. A glove made and used according to the method set forth in claim 6.

19. A glove made according to the method as set forth in any one of claims 7-13.

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C13

Sub C4

Sub A3

Sub A4

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20. A condom-catheter made according to the method set forth in claim 5.

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21. A condom-catheter made and used according to the method set forth in claim 6. 10

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Sub A5> 22. A condom-catheter made according to the method as set forth in any one of claims 7-13.

23. A oral-dental dam made according to the method set forth in claim 5.

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24. A oral-dental dam made and used according to the method set forth in claim 6.

25. A oral-dental dam made according to the method as set forth in any one of claims 7-13.

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26. A wound cover made according to the method as set forth in any one of claims 5 or 7-13.

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27. A wound cover made and used according to the method as set forth in claim 6. 10

Sub A6> 28. A surgical field delimiter made according to the method as set forth in any one of claims 5 or 7-13.

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16/29. A surgical field delimiter made and used according to the method set forth in claim 6. 10

30. A condom made of rubbery material comprising:

- 5 a compound selected from the group consisting of polybutadiene and its copolymers, ~~plastics such as~~ polyurethane elastomers and ~~its~~ ^{their} copolymers, trans pentenamer and its copolymers, polyethylene pimelate and its copolymers, trans-1,4-polybutadiene and its copolymers, synthetic isoprene and its copolymers, and synthetic cis-1,4-polyisoprene and its copolymers; and made
- 10 according to the method comprising the steps of:
- (i) manufacturing and cross-linking the rubbery material to a first shape and size;
 - (ii) after performing step (i), applying energy to the rubbery material, where the application of energy is equivalent in result to raising the rubbery material's
 - 15 temperature to at least the transition temperature;
 - (iii) after performing step (i), stretching the rubbery material to a second shape and size; wherein steps (ii) and (iii) are performed in such a way that the rubbery material is in a state in which it is both in the second shape and size and its effective temperature is at least the transition temperature; and
 - 20 (iv) after steps (ii) and (iii) have been performed, reducing the effective temperature of the rubbery material below the transition temperature while the rubbery material is kept in the second shape and size so that the rubbery material remains in the second shape and size until subsequent application of energy to the rubbery material equivalent in result to raising its temperature to at least the

FOI b7E b7F b7G b7H b7I b7J b7K b7L b7M b7N b7O b7P b7Q b7R b7S b7T b7U b7V b7W b7X b7Y b7Z

transition temperature whereupon the rubbery material shrinks from the second shape and size toward the first shape and size.

Sub A7 31. A condom consisting essentially of rubbery material selected from the group

5 consisting of polybutadiene and its copolymers, trans-1,4-polybutadiene and its copolymers, synthetic isoprene and its copolymers, and synthetic cis-1,4-polyisoprene and its copolymers.

32. A glove consisting essentially of rubbery material selected from the group
10 consisting of polybutadiene and its copolymers, trans-1,4-polybutadiene and its copolymers, synthetic isoprene and its copolymers, and synthetic cis-1,4-polyisoprene and its copolymers.

33. A oral-dental dam consisting essentially of rubbery material selected from
15 the group consisting of polybutadiene and its copolymers, trans-1,4-polybutadiene and its copolymers, synthetic isoprene and its copolymers, and synthetic cis-1,4-polyisoprene and its copolymers.

34. A stretchy-bandage consisting essentially of rubbery material selected from
20 the group consisting of polybutadiene and its copolymers, trans-1,4-polybutadiene and its copolymers, synthetic isoprene and its copolymers, and synthetic cis-1,4-polyisoprene and its copolymers.

Sub C6 35. A baby-bottle nipple consisting essentially of rubbery material selected from
25 the group consisting of polybutadiene and its copolymers, trans-1,4-polybutadiene

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and its copolymers, synthetic isoprene and its copolymers, and synthetic cis-1,4-polyisoprene and its copolymers.

36. A pacifier consisting essentially of rubbery material selected from the group consisting of polybutadiene and its copolymers, trans-1,4-polybutadiene and its copolymers, synthetic isoprene and its copolymers, and synthetic cis-1,4-polyisoprene and its copolymers.

37. A catheter consisting essentially of rubbery material selected from the group consisting of polybutadiene and its copolymers, trans-1,4-polybutadiene and its copolymers, synthetic isoprene and its copolymers, and synthetic cis-1,4-polyisoprene and its copolymers.

38. A tourniquet consisting essentially of rubbery material selected from the group consisting of polybutadiene and its copolymers, trans-1,4-polybutadiene and its copolymers, synthetic isoprene and its copolymers, and synthetic cis-1,4-polyisoprene and its copolymers.

39. A dental drain consisting essentially of rubbery material selected from the group consisting of polybutadiene and its copolymers, trans-1,4-polybutadiene and its copolymers, synthetic isoprene and its copolymers, and synthetic cis-1,4-polyisoprene and its copolymers.

40. An injection port for intravenous lines and catheters, the injection port consisting essentially of rubbery material selected from the group consisting of

FOI b7E b7F b7G b7H b7I b7J b7K b7L b7M b7N b7O b7P b7Q b7R b7S b7T b7U b7V b7W b7X b7Y b7Z

polybutadiene and its copolymers, trans-1,4-polybutadiene and its copolymers, synthetic isoprene and its copolymers, and synthetic cis-1,4-polyisoprene and its copolymers.

- 5 ^{41.} 39. An elastic band for articles of clothing, the elastic band consisting essentially of rubbery material selected from the group consisting of polybutadiene and its copolymers, trans-1,4-polybutadiene and its copolymers, synthetic isoprene and its copolymers, and synthetic cis-1,4-polyisoprene and its copolymers.

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